

IN THE CLAIMS:

1. (Cancelled)

2. (Currently Amended) A contactless IC tag that has a nonvolatile memory and is read and written contactlessly using radio waves, the contactless IC tag being attached to an item which passes through multiple stages of a life cycle from manufacture to disposal, the contactless IC tag comprising:

storing means having stage storage areas as many as the stages of the life cycle;

identifier holding means for holding stage identifiers that each identify a different one of the stage storage areas;

secret receiving means for receiving an access identifier in secrecy from an external access device;

judging means for judging whether the received access identifier matches one of the stage identifiers in the identifier holding means;

access information receiving means for receiving access information from the access device, when the access identifier matches one of the stage identifiers; and

accessing means for accessing a stage storage area that is identified by the access identifier, based on the received access information[[.]],

wherein the secret receiving means includes:

authenticator outputting means for generating a first authenticator and outputting the first authenticator to the access device;

acquiring means for acquiring a second authenticator that is obtained by encrypting the first authenticator by an encryption algorithm using the access identifier as an encryption key,

from the access device; and

encrypting means for encrypting the first authenticator by the encryption algorithm using the stage identifiers each as an encryption key, to generate third authenticators,

the judging means judges whether the acquired second authenticator matches one of the third authenticators, and if the second authenticator matches one of the third authenticators, judges that the access identifier matches one of the stage identifiers, and

the accessing means accesses a stage storage area identified by a stage identifier which is used as an encryption key to generate the third authenticator that matches the second authenticator, as the stage storage area identified by the access identifier.

3. (Cancelled)

4. (Currently Amended) The contactless IC tag of Claim [[3]]2,

wherein the authenticator outputting means generates the first authenticator randomly.

5. (Original) The contactless IC tag of Claim 4,

wherein the secret receiving means further includes:

channel selecting means for selecting one of a plurality of communication channels obtained by time-division multiplexing; and

identifier receiving means for receiving the access identifier in secrecy, through the selected communication channel.

6. (Original) The contactless IC tag of Claim 5,
wherein the channel selecting means selects the communication channel randomly.

7. (Original) The contactless IC tag of Claim 2,
wherein the storing means has a common storage area identified by a common identifier,
the identifier holding means stores the common identifier,
the judging means judges whether the received access identifier matches the common
identifier in the identifier holding means,
the access information receiving means receives the access information from the access
device, when the access identifier matches the common identifier, and
the accessing means accesses the common storage area identified by the access
identifier, based on the received access information.

8. (Original) The contactless IC tag of Claim 2,
wherein the nonvolatile memory is a fuse memory.

9. (Original) The contactless IC tag of Claim 2, being provided near a logotype that is
positioned on a surface of the item.

10. (Original) The contactless IC tag of Claim 2, further comprising
time information storing means for storing, when data is stored into the storing means,
time information into the storing means together with the data.

11. (Original) The contactless IC tag of Claim 2,
wherein the storing means has a first memory unit which is non-rewritable and a second memory unit which is rewritable.

12. (Original) The contactless IC tag of Claim 2,
wherein the storing means has an extension storage area for storing data which cannot be stored in the stage storage areas due to insufficient free space.

13. (Original) The contactless IC tag of Claim 10, further comprising
memory organizing means for deleting, when data cannot be stored into the storing means due to insufficient free space, data whose time information is oldest from the storing means, to increase the free space.

14. (Original) The contactless IC tag of Claim 2, further comprising:
master identifier holding means for holding a master identifier;
master identifier judging means for judging whether the received access identifier matches the master identifier in the master identifier holding means; and
master access information receiving means for receiving master access information from the access device, when the access identifier matches the master identifier,
wherein the accessing means accesses one of the stage storage areas based on the received master access information.

15.- 17 (Cancelled)

18. (Currently Amended) An access device for sending/receiving information to/from a contactless IC tag that has a nonvolatile memory and is read and written contactlessly using radio waves, the contactless IC tag being attached to an item which passes through multiple stages of a life cycle from manufacture to disposal and having stage storage areas as many as the stages of the life cycle, each stage storage area being identified by a different secret identifier, the access device comprising:

identifier storing means for storing an access identifier;

secret sending means for sending the access identifier in secrecy to the contactless IC tag; and

access information sending means for sending access information to the contactless IC tag, when the contactless IC tag judges that the access identifier properly identifies one of the stage storage areas[[.]],

wherein the contactless IC tag stores stage identifiers that each identify a different one of the stage storage areas,

the secret sending means includes:

authenticator receiving means for receiving a first authenticator from the contactless IC tag; and

authenticator outputting means for encrypting the received first authenticator by an encryption algorithm using the access identifier as an encryption key to generate a second authenticator, and sending the second authenticator to the contactless IC tag, and

the access information sending means sends the access information to the contactless IC tag, when the contactless IC tag (a) encrypts the first authenticator by the encryption algorithm

using the stage identifiers each as an encryption key to generate third authenticators, (b) judges whether the second authenticator matches one of the third authenticators, and (c) if the second authenticator matches one of the third authenticators, judges that the access identifier properly identifies one of the stage storage areas.

19-25. (Cancelled)